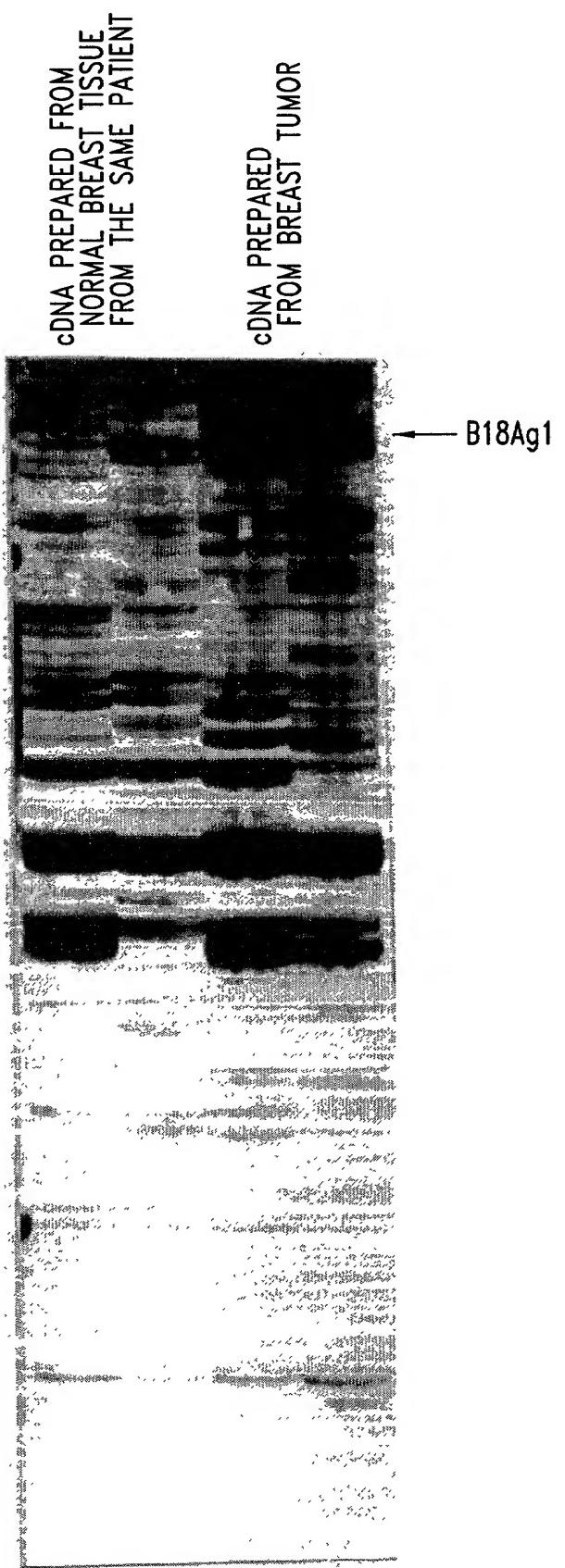


Title: COMPOSITIONS AND METHODS FOR THE THERAPY AND DIAGNOSIS OF BREAST CANCER

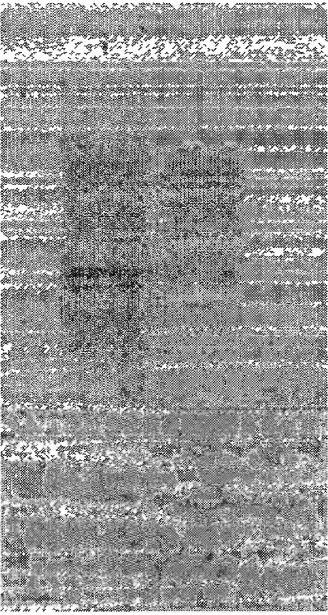
Inventor(s): Tony N. Frudakis et al. Express Mail No. EV020665680US Docket No. 210121.419C13



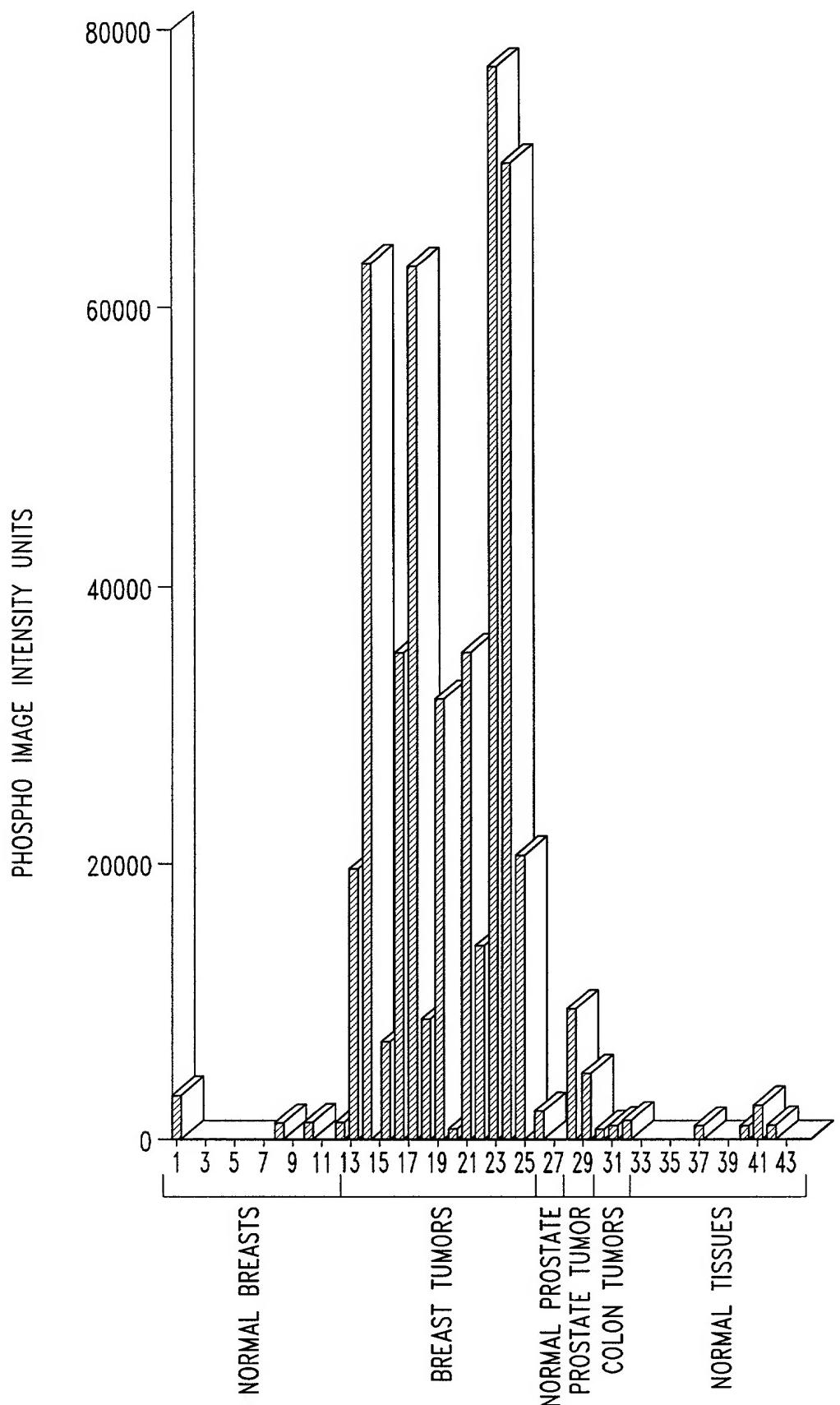
*Fig. 1*

Title: COMPOSITIONS AND METHODS FOR THE THERAPY AND DIAGNOSIS OF BREAST CANCER  
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BREAST TUMOR mRNA  
NORMAL BREAST TISSUE mRNA



*Fig. 2*

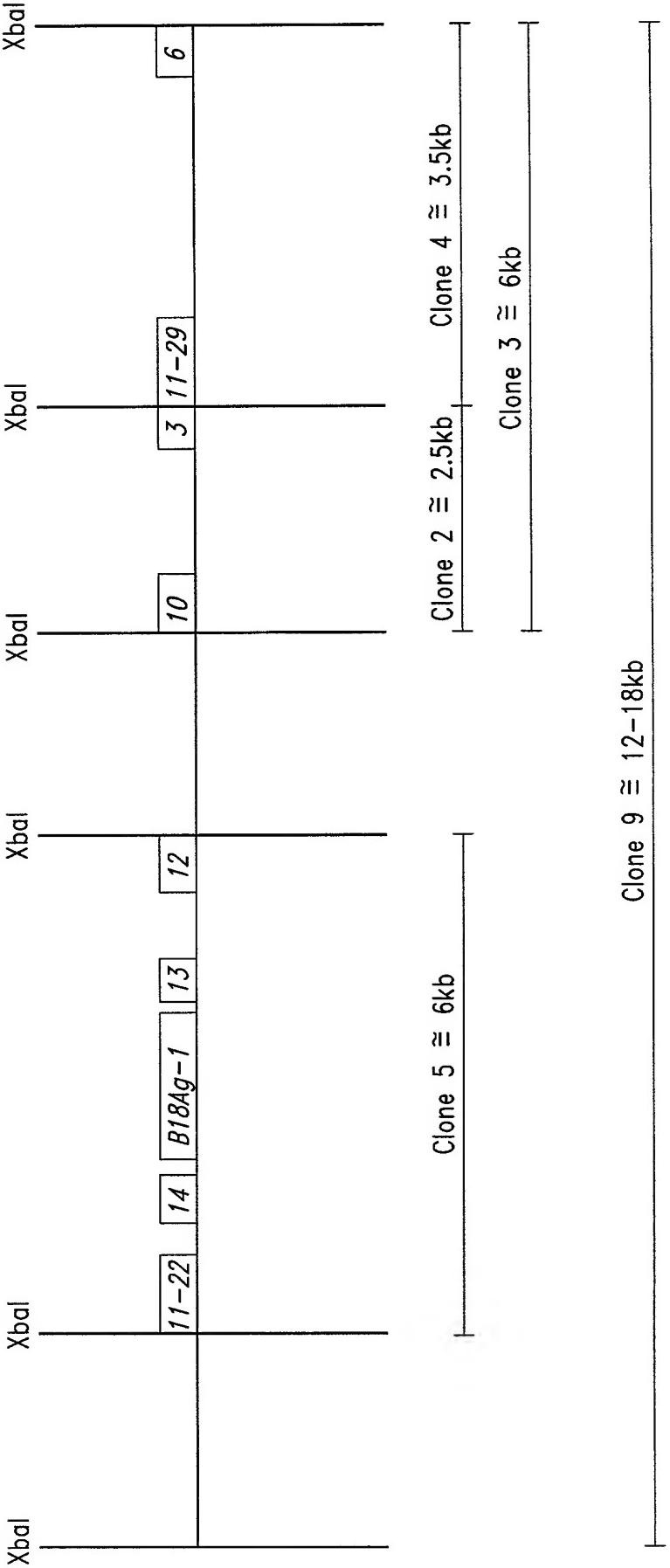


*Fig. 3*

Title: COMPOSITIONS AND METHODS FOR THE THERAPY AND DIAGNOSIS OF BREAST CANCER

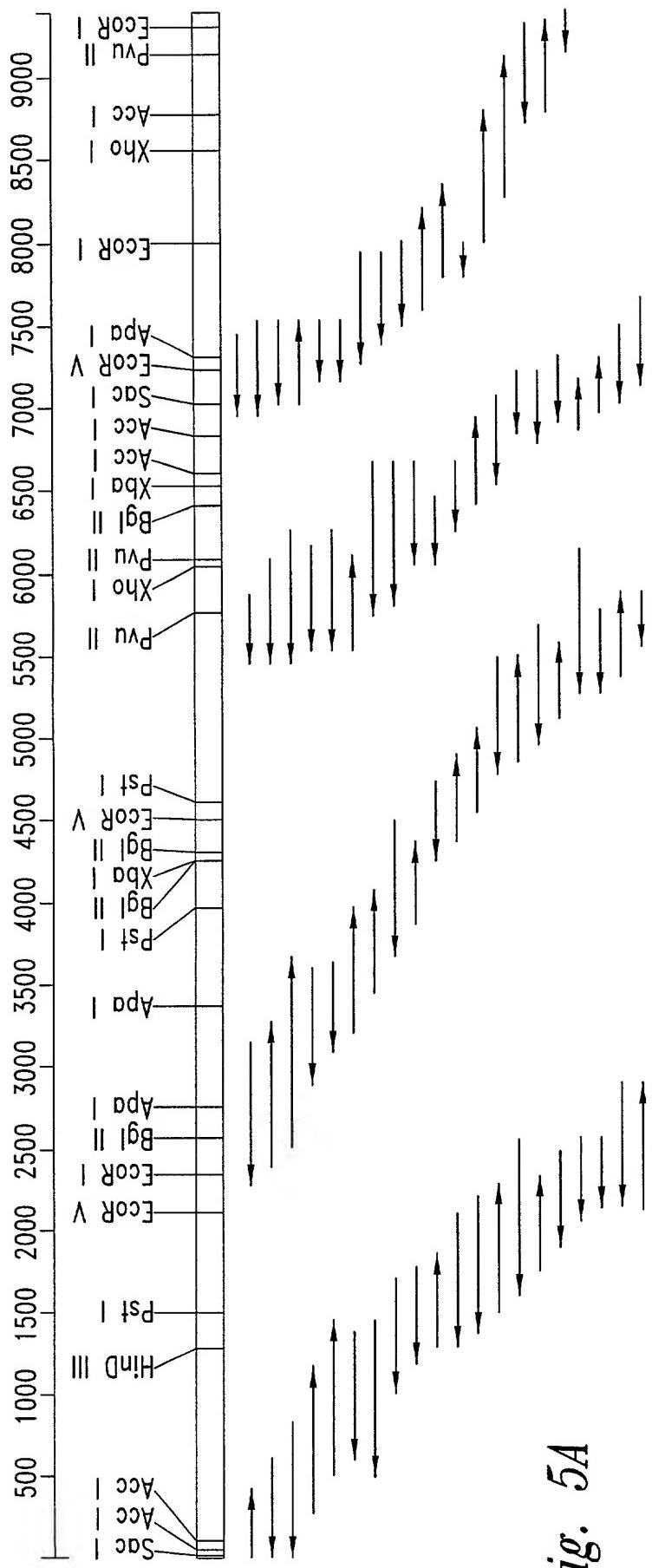
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GENOMIC CLONE MAP



*Fig. 4*

Title: COMPOSITIONS AND METHODS FOR THE THERAPY AND DIAGNOSIS OF BREAST CANCER  
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*Fig.* 5A

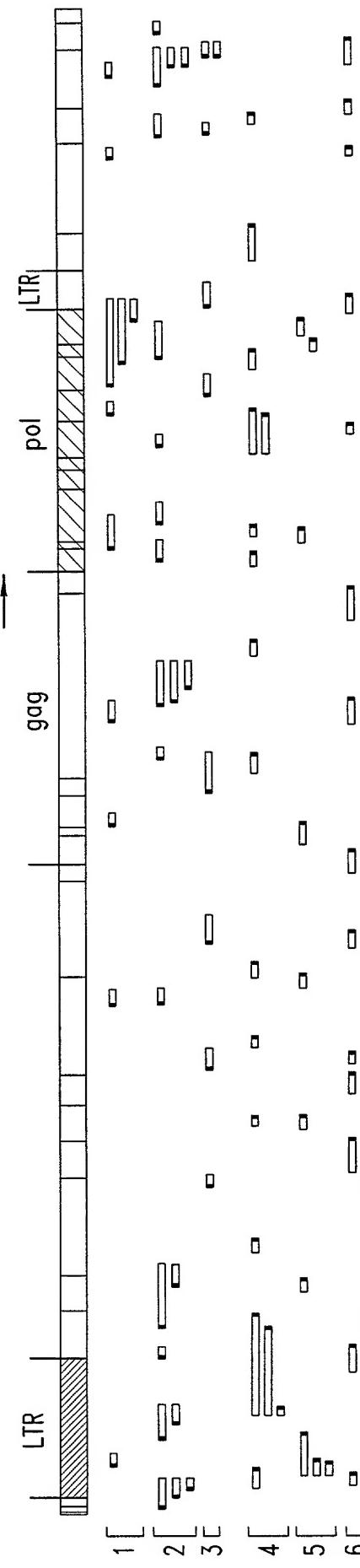


Fig. 5B

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B18Ag1

TTA GAG ACC CAA TTG GGA CCT AAT TGG GAC CCA AAT TTC TCA AGT GGA 48  
Leu Glu Thr Gln Leu Gly Pro Asn Trp Asp Pro Asn Phe Ser Ser Gly  
1 5 10 15

GGG AGA ACT TTT GAC GAT TTC CAC CGG TAT CTC CTC GTG GGT ATT CAG 96  
Gly Arg Thr Phe Asp Asp Phe His Arg Tyr Leu Leu Val Gly Ile Gln  
20 25 30

GGA GCT GCC CAG AAA CCT ATA AAC TTG TCT AAG GCG ATT GAA GTC GTC 144  
Gly Ala Ala Gln Lys Pro Ile Asn Leu Ser Lys Ala Ile Glu Val Val  
35 40 45

CAG GGG CAT GAT GAG TCA CCA GGA GTG TTT TTA GAG CAC CTC CAG GAG 192  
Gln Gly His Asp Glu Ser Pro Gly Val Phe Leu Glu His Leu Gln Glu  
50 55 60

GCT TAT CGG ATT TAC ACC CCT TTT GAC CTG GCA GCC CCC GAA AAT AGC 240  
Ala Tyr Arg Ile Tyr Thr Pro Phe Asp Leu Ala Ala Pro Glu Asn Ser  
65 70 75 80

CAT GCT CTT AAT TTG GCA TTT GTG GCT CAG GCA GCC CCA GAT AGT AAA 288  
His Ala Leu Asn Leu Ala Phe Val Ala Gln Ala Ala Pro Asp Ser Lys  
85 90 95

AGG AAA CTC CAA AAA CTA GAG GGA TTT TGC TGG AAT GAA TAC CAG TCA 336  
Arg Lys Leu Gln Lys Leu Glu Gly Phe Cys Trp Asn Glu Tyr Gln Ser  
100 105 110

GCT TTT AGA GAT AGC CTA AAA GGT TTT 363  
Ala Phe Arg Asp Ser Leu Lys Gly Phe  
115 120

Fig. 6

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B17Ag1

GC TGGGCACAGT GGCTCATACC TGTAAATCCTG ACCGTTTCAG AGGCTCAGGT 60

CG CTTGAGCCCCA AGATTTCAAG ACTAGTCTGG GTAACATAGT GAGACCCTAT 120

AA AAATAAAAAAA ATGAGCCTGG TGTAGTGGCA CACACCAGCT GAGGGAGGGAG 180

CT AGGAGA 196

Fig. 7

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B17Ag2

GC TTGGGGGCTC TGACTAGAAA TTCAAGGAAC CTGGGATTCA AGTCCAACTG 60  
AC TTACACTGTG GNCTCCAATA AACTGCTTCT TTCCATTCC CTCTCTATTA 120  
AA GGAAAACGAT GTCTGTGTAT AGCCAAGTCA GNTATCCTAA AAGGAGATAAC 180  
AT TAAATATCAG AATGTAAAAC CTGGGAACCA GGTTCCCAGC CTGGGATTAA 240  
CA AGAAGACTGA ACAGTACTAC TGTGAAAAGC CCGAAGNGGC AATATGTTCA 300  
TT GAAGGATGGC TGGGAGAACATG AATGCTCTGT CCCCCAGTCC CAAGCTCACT 360  
CT CCTTATAGC CTAGGAGA 388

*Fig. 8*

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B13Ag2a

GC CTATAATCAT GTTTCTCATT ATTTCACAT TTTATTAAACC AATTCTGTT 60  
AA AATATGAGGG AAATATATGA AACAGGGAGG CAATGTTAG ATAATTGATC 120  
TG ATTTCTACAT CAGATGCTCT TTCTTCCT GTTTATTCC TTTTATTTC 180  
GG TCGAATGTAAGCTTGTT TCAAGAGAGA GTTTGGCAG TTTCTGTAGC 240  
CT GCTCATGTCT CCAGGCATCT ATTTGCACTT TAGGAGGTGT CGTGGGAGAC 300  
CT ATTTTTCCA TATTTGGGCA ACTACTA 337

*Fig. 9*

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B13Ag1b

GC CATACTAGTGC CTTCCATT ATTAAACCC CACCTGAACG GCATAAACTG 60  
GC TGGTGTAAAA TACTGTAAAC AATAAGGAGA CTTGCTCTT CATTAAACC 120  
AT TTCACTATTT ACGCTCGAGG GTTTTACCG GTTCTTTT ACACTCCTA 180  
TT TAAGTCGTTT GGAACAAGAT ATTTTTCTT TCCTGGCAGC TTTAACATT 240  
TT TGTGTCTGGG GGACTGCTGG TCACTGTTTC TCACAGTTGC AAATCAAGGC 300  
CC AAGAAAAAAA AATTTTTTG TTTTATTGA AACTGGACCG GATAAACGGT 360  
CG GCTGCTGTAT ATAGTTTAA ATGGTTATT GCACCTCCTT AAGTTGCACT 420  
GG GGGGNTTTG NATAGAAAGT NTTTANTCAC ANAGTCACAG GGACTTTNT 480  
NA CTGAGCTAAA AAGGGCTGNT TTTCGGGTGG GGGCAGATGA AGGCTCACAG 540  
TC TCTTAGAGGG GGGAACTNCT A 571

*Fig. 10*

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B13Ag1a

TA ATAACCTAAA TATATTTGA TCACCCACTG GGGTGATAAG ACAATAGATA 60  
TT TCCAAAAAGC ATAAAACCAA AGTATCATAc CAAACCAAAT TCATACTGCT 120  
CC GCACTGAAAC TTCACCTTCT AACTGTCTAC CTAACCAAAT TCTACCCCTC 180  
GG TGCGTGCTCA CTACTCTTTT TTTTTTTTTT TTNTTTGG AGATGGAGTC 240  
CA GCCCAGGGGT GGAGTACAAT GGCACAACT CAGCTCACTG NAACCTCCGC 300  
TT CATGAGATTc TCCTGNTTCA GCCTTCCCAG TAGCTGGGAC TACAGGTGTG 360  
TG CCTGGNTAAT CTTTTTNGT TTTNGGGTAG AGATGGGGT TTTACATGTT 420  
TG GTNTGAACT CCTGACCTCA AGTGATCCAC CCACCTCAGG CTCCCAAAGT 480  
TA CAGACATGAG CCACTGNGCC CAGNCCTGGT GCATGCTCAC TTCTCTAGGC 540

*Fig. 11*

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B11Ag1

TG CACATGCAGA ATATTCTATC GGTACTTCAG CTATTACTCA TTTTGATGGC 60  
AG CCTATCCTCA AGATGAGTAT TTAGAAAGAA TTGATTTAGC GATAGACCAA 120  
GC ACTCTGACTA CACGAAATTG TTCAGATGTG ATGGATTAT GACAGTTGAT 180  
GA GATTATTAAG TGATTATTT AAAGGGAATC CATTAAATTCC AGAACATCTT 240  
TC AAGATGATAT AGAAATAGAA CAGAAAGAGA CTACAAATGA AGATGTATCA 300  
TA TTGAAGAGCC TATAGTAGAA AATGAATTAG CTGCATTTAT TAGCCTTACA 360  
TT TTCCCTGATGA ATCTTATATT CAGCCATCGA CATAGCATTA CCTGATGGGC 420  
GA ATAATAGAAA CTGGGTGCGG GGCTATTGAT GAATTCATCC NCAGTAAATT 480  
AC AAAATATAAC TCGATTGCAT TTGGATGATG GAATACTAAA TCTGGCAAAA 540  
GG AGCTACTAGT AACCTCTCTT TTTGAGATGC AAAATTTCT TTTAGGGTTT 600  
CT ACTTTACGGA TATTGGAGCA TAACGGGA 638

*Fig. 12*

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B3CA3c

ACTGATGGAT GTCGCCGGAG GCGAGGGGCC TTATCTGATG CTCGGCTGCC TGTCGTGAT	60
GTGCGCGGCG ATTGGGCTGT TTATCTAAA CACCGCCACG GCGGTGCTGA TGGCGCCTAT	120
TGCCTTAGCG GCGGCGAAGT CAATGGCGT CTCACCCAT CCTTTGCCA TGGTGGTGGC	180
GATGGCGGCT TC GGCGGGCGT TTATGACCCC GGTCTCCTCG CCGGTTAAC A CCCTGGTGCT	240
TGGCCCTGGC AAGTACTCAT TTAGCGATT TGTAAAATA GGC GTG	286

*Fig. 13*

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B9CG1

AG CAGCCCCCTC TTCTCAATT CATCTGTAC TACCCCTGGTG TAGTATCTCA	60
CA TTTTATAGC CTCTCCCTG GTCTGTCTT TGATTTCT GCCTGTAATC	120
AC ATAATGCAA GTAAACATT CTAAAGTGTG GTTATGCTCA TGTCACTCCT	180
AA ATAGTTCCA TTACCGTCTT AATAAAATTG GGATTTGTTT TTNCTATTN	240
CA CCTATGACCG AA	262

*Fig. 14*

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B9CG3

AG CAAAGCCAGT GGTTTGAGCT CTCTACTGTG TAAACTCTA ACCCAAGGCC 60  
TA AATGGTGGCA GGATTTTAT TATAAACATG TACCCATGCA AATTCCTAT 120  
GA TATATTCTTC TACATTAAA CAATAAAAT AATCTATTT TAAAAGCTA 180  
AG TTAGGTAAGA GTGTTAATG AGAGGGTATA AGGTATAAAAT CACCAAGTCAA 240  
TG CCTATGACCG A 261

*Fig. 15*

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B2CA2

CGACGTCGGT AAAATCGGAC ATGAAGCCAC CGCTGGTCTT TTCTGTCCGAG CGATAGGC	60
CGGCCAGCCA GCGGAACGGT TGCCCCGATG GCGAAGCGAG CCGGAGTTCT TCGGACTGAG	120
TATGAATCTT GTTGTGAAAA TACTGCCGC CTTCGTTGA CGACGTCGCG TCGAAATCTT	180
CGAACTCCTT ACGATCGAAG TCTTCGTGGG CGACGATCGC GGTCAAGTTCC GCCCCACCGA	240
AATCATGGTT GAGCCGGATG CTGCCCGA AGCCCT	276

Fig. 16

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B3CA1

CCCAGGTCAA CCAGGCTGCA ACACGCAGGT CCTTGGATTG GGCACGAAGC AGCGCTTCGC	60
TGTTTTCCAG GATTTCAAC CAGTCGGTCT GGCGGTTCTC ATGGAGCGAG AGCGCCTTGC	120
CCAGCTCATT TTCCAGCGCC TCGTATTGCG TGAAAAAACG CACATCCTCA CCCGCAAAGA	180
CATCCTTGA AATCGGCTGT TCCGCGAGTT CCAGATANTG CGAGGAGAGC TTGCTCGAAT	240
AGGTCACTCT AACCCCTCAA TGCACACCAT GTGCGCCAAT GAATATCTTA ACAATTCAAC	300
TAGTTGGCAT AANAACCGAA CGAAAATCCC AATAGTCTGA AGAGCTCTT TG	352

Fig. 17

Title: COMPOSITIONS AND METHODS FOR THE THERAPY AND DIAGNOSIS OF BREAST CANCER  
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NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B3CA2

CTGCATGTCC ACGGCCTGGA TTTACGGGTG GTCGGCGTTC ACCCCTGGCA GCTGGCGCTC	60
TTCCCGACCA GGCCCAGCAG GATGTGTGGG GCAAGGATAA CGGCGTGCAG ATCGCCTCGA	120
CCTATATGCC TACTGGCAAG GCCGAGCCCG TGGAAGGCAG ATTCAAGGTTT ANCAGGTCGCT	180
GGAGCTTTTC CACCGGCTCC ATGCATTGTG ACTGGCTGTT TCTAGGGCGGT CTGTTGCCA	240
AGCGTGATGG TACGTCTGGC CTGGAGCATG TGACTTTCTG	280

Fig. 18

NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B3CA3

AG GGAGCAAGGA GAAGGCATGG AGAGGCTAN GCTGGTCTG GCCTACGACT 60

CT GTGCCGGGG ATGGTGGAGA ACTGAAGCGG GACCTCTCG AGGTCTCCG 120

TC NCCGTCCAGG AGGAGGGTCT TTCCGTGGTC TNGGAGGAGC GGGGGGAGAA 180

TC ATGGTCNACA TCCC 204

*Fig. 19*

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NUCLEOTIDE SEQUENCE OF THE REPRESENTATIVE  
BREAST-TUMOR SPECIFIC cDNA B4CA1

TC AGGAGCGGGT AGAGTGGCAC CATTGAGGGG ATATTCAAAA ATATTATTTT 60  
TG ATAGTTGCTG AGTTTTCTT TGACCCATGA GTTATATTGG AGTTTATTTT 120  
CC AATCGCATGG ACATGTTAGA CTTATTTCT GTTAATGATT NCTATTTTA 180  
GA TTTGAGAAAT TGGTTNTTAT TATATCAATT TTTGGTATT GTTGAGTTG 240  
GC TTAGTATGTG ACCA 264

*Fig. 20*

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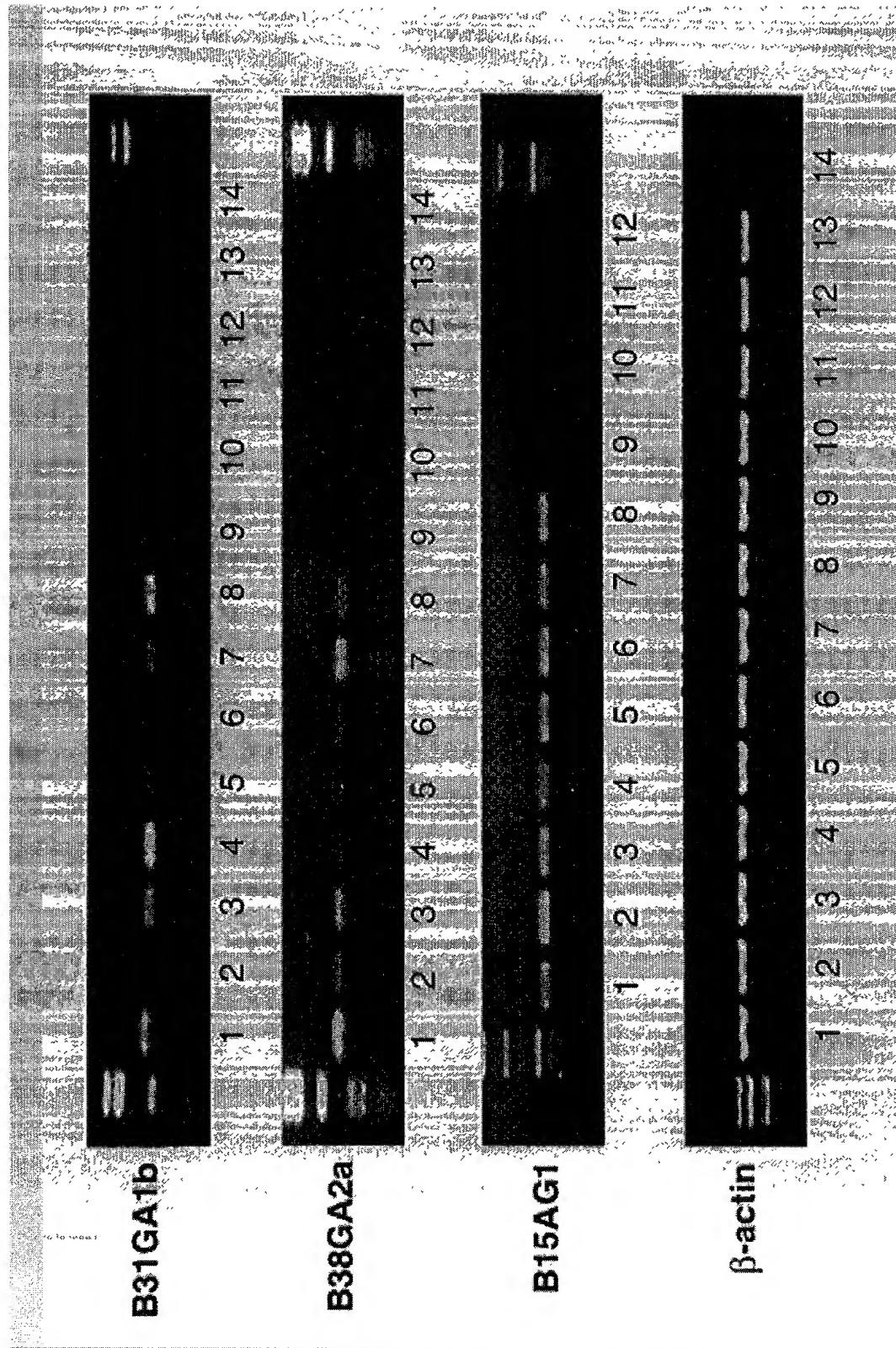


Fig. 21A

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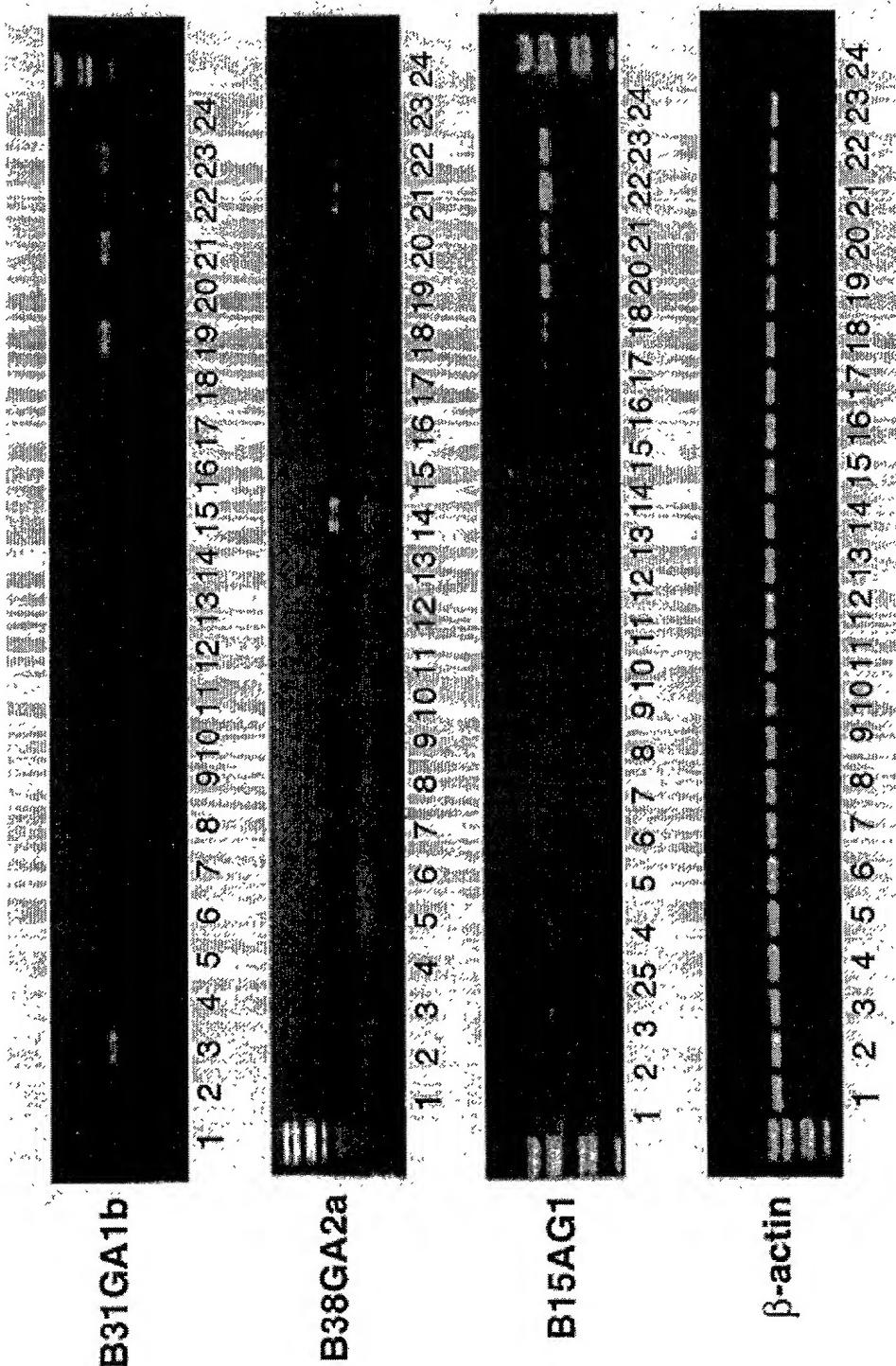
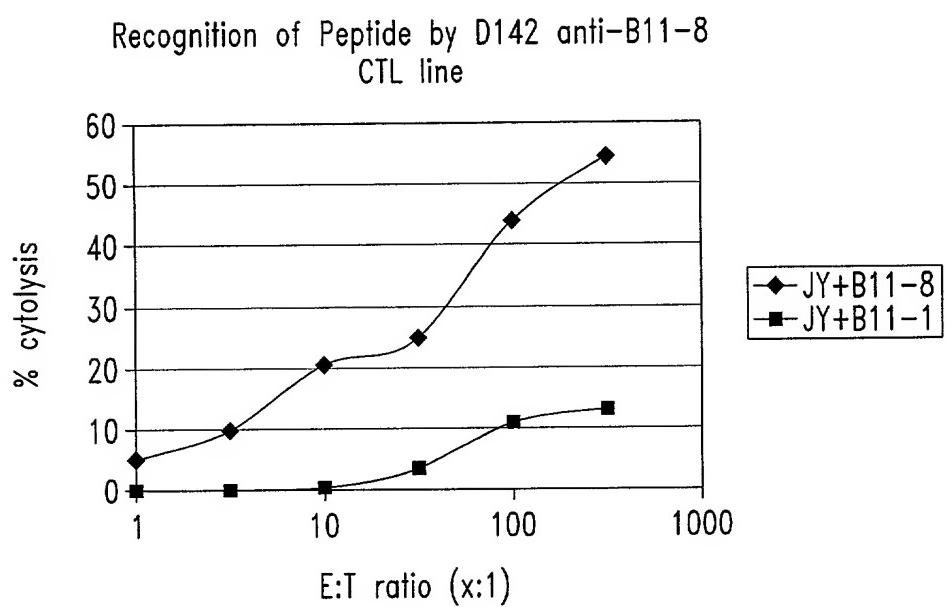


Fig. 21B



*Fig. 22*

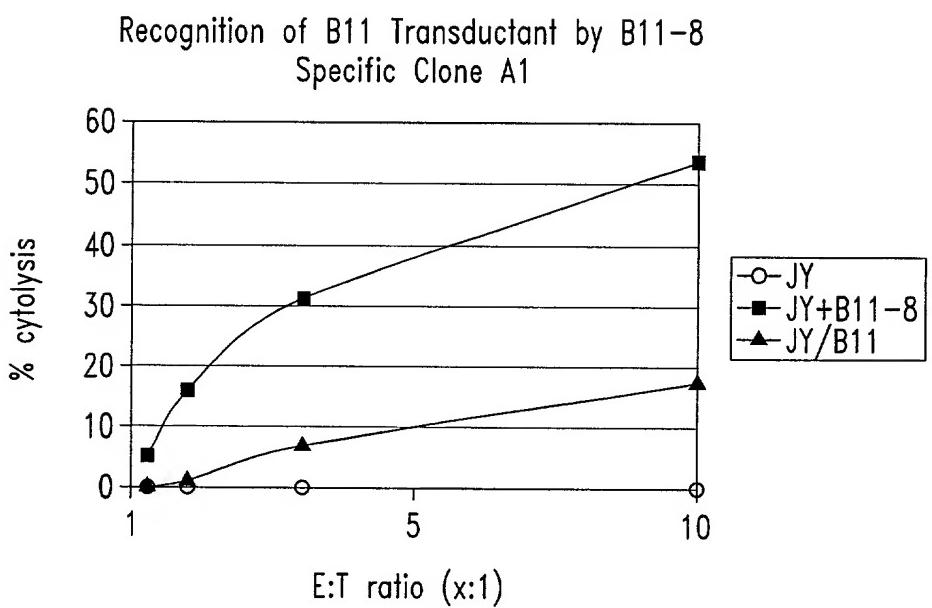


Fig. 23

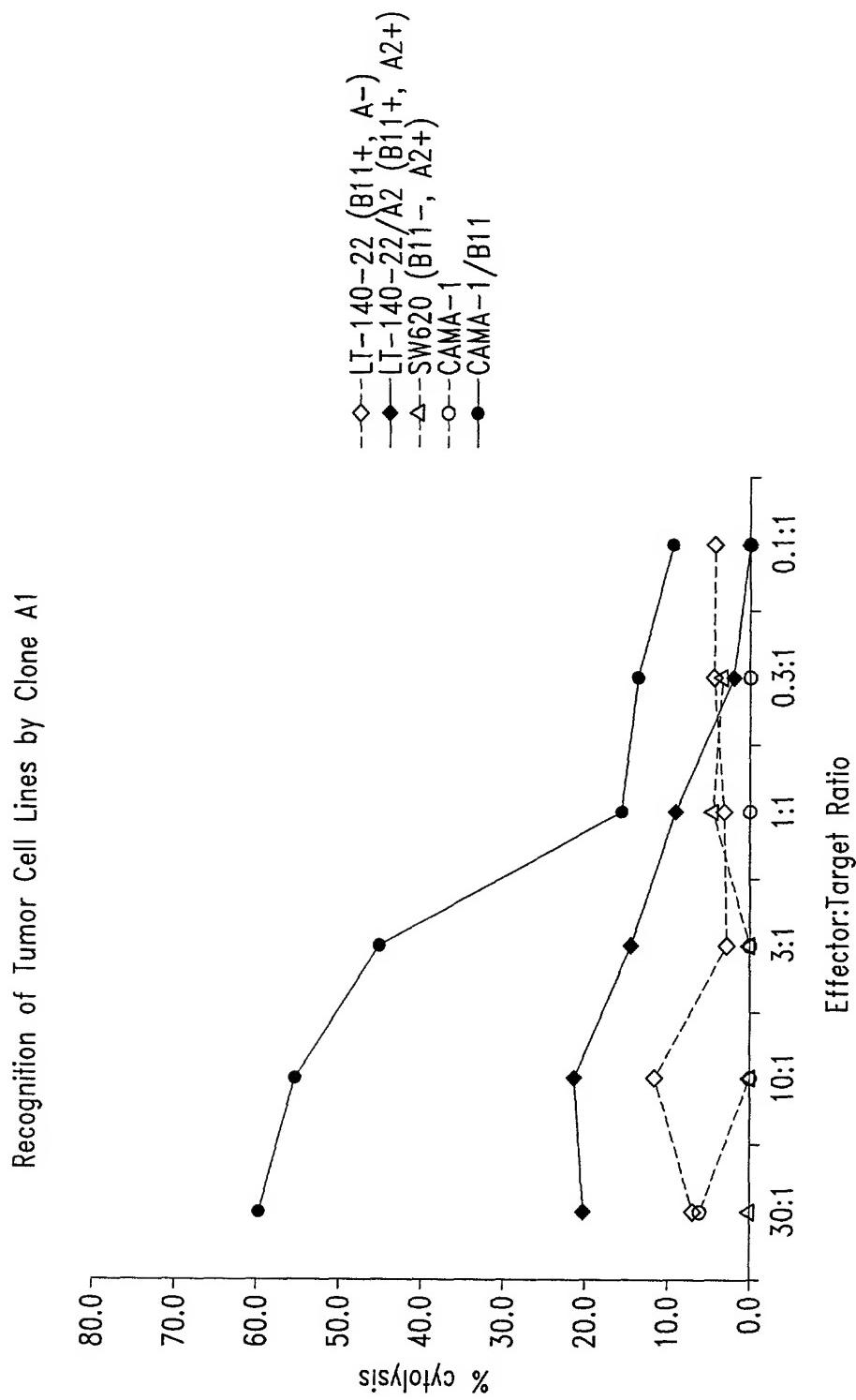


Fig. 24